



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/500,438

06/28/2004

Hsuan-Ming Shih

88538.0002

2424

26021 7590 04/18/2007
HOGAN & HARTSON L.L.P.
1999 AVENUE OF THE STARS
SUITE 1400
LOS ANGELES, CA 90067

EXAMINER

HAILEMARIAM, EMMANUEL

ART UNIT

PAPER NUMBER

2609

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

04/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/500,438

Applicant(s)

SHIH, HSUAN-MING

Examiner

Emmanuel Hailemariam

Art Unit

2609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-38 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 23-38 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112: The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 23 and 27 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase "may be" on claim 23 lines 6 does not clearly indicate whether the indication layer is part of the antenna array printed on a insulation membrane.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

Art Unit: 2609

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim23-34 and 37-38 are rejected under 35 U.S.C. 102(e) as being anticipated by Shi et al. (US 2004/0239642).

As to claim 23, Shi discloses, a touch control display screen with built-in membrane antenna array lattice (see.fig.3) electromagnetic induction layer [0008], including at least a display screen and a shell see.fig3 (3,1); wherein an induction layer is provided in the rear of the display screen [0006], the output of the induction layer is connected to an induction control circuit , a display screen control circuit is also provided in the shell [0005], characterized by: the said induction layer may be the antenna array printed on the insulation membrane fig.4(412) [0009] and arranged along the X, Y axes [0008], therein the area enclosed by each lattice unit constitutes one induction cell (see.fig.4 [0005]).

AS to claim 24, Shi discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 23, characterized by: a shield layer is provided after the induction layer in order to enhance the anti-interference ability of the device (see fig.1 (5) [0005]).

As to claim 25, Shi discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 23,

Art Unit: 2609

characterized by: a buffering layer is also provided between the induction layer and the shield layer [0025].

As to claim 26, Shi discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 25, characterized by: a space is provided between the induction layer and the shield layer [0025].

As to claim 27, Shi discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 23, characterized by : by said induction layer may be the antenna array formed by etching the copper-platinum covering the insulation membrane [0029].

As to claim 28, Shi discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 23, characterized by: said induction layer is an antenna array formed by the silver-plasm or the mixture material of the silver-plasm and the carbon-plasm which is printed on the insulation membrane [0009]; the said induction layer can be printed on two surfaces of the insulation membrane, or printed on one surface of the insulation membrane, and there are two layers of insulation membrane in which one is overlaid on the other (see fig.1 (411) [0010,0023 0029,0030].

As to claim 29, Shi discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 23, characterized by: the said insulation membrane is made by film material (see.fig.3 (411) [0023, 0026]).

As to claim 30, Shi discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 23, characterized by: said induction layer consists of two or more layers, and the induction cells on respective induction layers are set to interlace each other [0010,0029, 0030].

As to claim 31, Shi discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 23, characterized by: the said components of the induction control circuit are mounted on a printed substrate which is separated from the induction layer, the output of the antenna array of the induction layer is connected to the corresponding input terminal on the printed substrate by means of pressure-connection, plug-in connection or welding-connection [0005, 0013].

As to claim 32, Shi discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 31, characterized by: the said output of the antenna array (see fig.3 (antenna Array)) of the induction layer is positioned between a hard sheet and a printed substrate; a buffering layer [0025] is provided between the hard sheet and the output of the antenna array; the

Art Unit: 2609

hard sheet, the buffering layer and the output of the antenna array are overlaid on the printed substrate to put the circuit (fig.3) in a printed circuit board (PCB) by means of the screwing-conjunction; the output of the antenna array is connected with corresponding input terminal [0028, 0029].

As to claim 33, Shi discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 32, characterized by: the said printed substrate is the printed substrate of the display screen control circuit in the body of the display screen [0005,0023].

As to claim 34, Shi discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 32, characterized by: the said printed substrate is the printed substrate of the display screen control circuit outside the body of the display screen, or a self contained unit, otherwise it is set on the main board of PC; the connection between them is achieved by line or cable (see fig.3 [0028]).

As to claim 35, Shi discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 23, characterized by: the said induction control circuit is positioned outside the body, and connected to the body through the electrical connection means; the output of the antenna array (see fig.4 (412), [0023] of the induction layer is connected with the output

Art Unit: 2609

interface of the induction layer by means of pressure connection, plug-in connection, or welding- connection; an interface which can match the electrical connection means of the induction layer is provided on the control circuit ([0005] it is implicit that the layer is connected using one of the connections means).

As to claim 36, Shi discloses a touch screen with built-in wire lattice electromagnetic induction layer according to claim 35, characterized by: the said output interface of the induction layer and the interface of the control circuit is one of the following: pin-type connection means, flexible printed circuitry means, PIN-PIN connection means, welding spot (VGA) thermal-melted connection means, ultrasonic welding device, solder-plate welding device, puncture-type connection means [0004, [0029].

As to claim 37, Shi discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 23, characterized by: a protecting layer is provided in the front of the said display screen [0013].

As to claim 38, Shi discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 23, characterized by: the said display screen is a plasma display screen or a liquid-crystal display screen [0005].

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Durham (US6417813) discloses feed through lens antenna and associated method. Tamaru (4933544) disclose a touch entry apparatus for cathode ray tube with non-perpendicular detection beams. Lichtenstein (5428417) disclose visual lecture aid.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Hailemariam whose telephone number is 571-270-1545. The examiner can normally be reached on M-F 8:00am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on 571-270-1550. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

E.H

03/30/07


AMARE MENGISTU
SUPERVISORY PATENT EXAMINER